



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

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Secretary

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CERTIFIED MAIL

November 19, 2014

William Thibeault
New Ventures Associates, LLC
85-87 Boston Street
Everett, MA 02149

Re: NEWBURYPORT - Solid Wastes/COR
Crow Lane
Crow Lane Landfill
FMF Number: 39545
Landfill Closure Completion Certification
Notice of Technical Deficiency
Transmittal Number X258640

Dear Mr. Thibeault:

The Massachusetts Department of Environmental Protection, Northeast Regional Office, Bureau of Waste Prevention, Solid Waste Management Section ("MassDEP") has reviewed your application for a determination of completion of closure of the Crow Lane Landfill (the "landfill"), located on Crow Lane in Newburyport, Massachusetts. SITEC Environmental, Inc., of Marshfield, Massachusetts ("SITEC") prepared and submitted the application, category BWPSW43 - *Landfill Closure Completion*, transmittal number X258640, on behalf of New Ventures Associates, LLC of Everett, Massachusetts ("New Ventures").

By letter dated December 13, 2013 (which was received by MassDEP December 20, 2013), SITEC submitted the above referenced application, including a report titled "*New Ventures Associates LLC, Crow Lane Landfill, Newburyport, MA, Determination of Landfill Closure Completion, BWP SW 43 – Transmittal No. X258640, December 13, 2013*" and plans titled "*Crow Lane Landfill, Landfill Final Closure, Dec. 13, 2013*". By memorandum dated June 30, 2014 (which was received by MassDEP July 1, 2014), SITEC submitted additional information in support of the application. By letter dated August 1, 2014, MassDEP identified to New Ventures additional information required for the application to comply with Paragraphs 11.j and 12.j of the Final Judgment and Settlement Agreement (Civil Action No, 06-0790 C, May 27,

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2009, as amended, the “Final Judgment”) and for MassDEP to complete its review. By memorandum dated September 15, 2014 (which was received by MassDEP September 16, 2014), SITEC submitted additional information, including revised sheets of the plans.

Pursuant to Paragraph 2 of the Order entered by the Suffolk Superior Court (Lauriat, J.), Civil Action No. SUCV2006-0790 C, on November 5, 2014 (the “Order”), MassDEP hereby provides notice of deficiencies in the application and its supporting documents.

1. *Differences from plans as filed with Court.* The discussion of differences between the “as-built” plans and the plans entered by the Court (the “Court Plans”) does not include the following items that are shown on the Court Plans. Please amend the discussion and as-built plans, as necessary, to address these items and include, at a minimum, discussion of the significance and impact of any variance from the Court Plans, and why the as-built condition is equivalent in function to the design as shown on the Court Plans.
 - a. the stilling basin at the confluence of the drainage swales at the southeast corner of the landfill, prior to the culvert connecting the swales to Basin 1;
 - b. the stone baffles in Basin 1;
 - c. the weep drains at the toe of slopes, the transition from vegetated slope to rip rapped slope, and at the storm water swales;
 - d. the sub-drains at the perimeter of the top plateau area;
 - e. an apron, of undefined construction, at the inlet to Basin 2;
 - f. appurtenances for monitoring the stability of the western slope that were proposed and approved, as part of the slope stability analysis;
 - g. gates, fencing or other access restrictions; and
 - h. removal and restoration of the site of the office trailer.
2. *Plan details.* Please modify the “as-built” plans to include the following construction details. Where the “as-built” plans details differ from the Court Plans please also discuss the significance and impact of the change including, at a minimum, why it is equivalent in function to the design as shown on the Court Plans.
 - a. the details for the construction of the detention basins and their outlet structures;
 - b. the details for the 30 inch storm water culvert from Basin 1, and the stilling basin at the westerly end of the culvert;
 - c. the details for the drain from Basin 1 to the vernal pool;
 - d. the details (including cross sections) for the cap over the haul road identifying how the abandoned asphalt grindings pavement layer of the road relates to the final placement of the Flexible Membrane Liner (the “FML”);
 - e. the details for the construction and/or abandonment of the leachate collection tanks and their appurtenant piping;
 - f. the details (including cross section and specifications) for the easterly perimeter berm;
 - g. a full description of the berm details including, but not limited to, the details for the first phase (“old perimeter berm”) of construction of the westerly berm and the details for the toe construction for the northerly and southerly berm;

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- h. the disconnection of the infiltrators in the new (2011) above cap landfill gas header;
 - i. documentation of the maintenance and repairs of the landfill gas wellheads performed in 2012; and
 - j. the details for the termination of the new above cap landfill gas header.
- 3. *Survey controls.* The following information must be provided:
 - a. a permanent bench mark for survey control;
 - b. survey information to locate and reconnect the break point at which the infiltrators are disconnected; and
 - c. survey data for locating the end of pipe of the above cap landfill gas header.
- 4. *Documentation of Cap Construction.* The discussion of the sand drainage layer, vegetative support layer, and drainage swale construction in the Closure Completion report must be expanded to address the following comments on the cap construction. Where the as-built conditions differ from the Court Plans this should include, without limitation, discussion of the current condition and performance of the cap (e.g., stability, erosion, slumping, ponding of water, etc.), the projected future performance of the cap, and measures to monitor and assure the performance of the cap and related appurtenances.
 - a. *Thickness of soil layers:* SITEC stipulates in the Completion Certification that the placement of the sand drainage layer and vegetative support layer soils was controlled during construction with the use of grade stakes, that the inspector verified the measurements on grade stakes, and that random test holes were made at a frequency of not less than five (5) per acre, including a plan showing the approximate locations of the test holes. SITEC states that the thickness of the vegetative support layer (see 4.b., below) exceeds the specified thickness. However, no documentation (recorded measurements, etc.) is provided to demonstrate that the stakes were properly placed and maintained during construction, or that staked grades were achieved or exceeded. Therefore, the application needs to be amended to include additional information on the thickness of the soil layers, or if not available, an opinion about the adequacy of the sand drainage layer and vegetative support layer based on the current condition and performance of the cap and the potential impact on the future performance of the cap, including the basis for the opinion.
 - b. *Vegetative support layer soil organic content:* SITEC states in the Closure Completion report that the average organic content of the soil in the vegetative layer was 7.35% and is representative of the soil. In addition, SITEC states the actual thickness of the vegetative support layer exceeds 8 inches. The Court Plans specified that the vegetative support layer must have a minimum organic content of 8% and a minimum thickness of 8 inches. The vegetative support layer, as constructed, does not meet the specification stipulated in the Court Plans. SITEC concludes in the Closure Completion report that an 8 inch layer with 7.35% organic content is superior to a 12 inch layer with 5% organic content. However,

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SITEC does not provide any information or data to support this conclusion.

Therefore, please incorporate an evaluation of the impact of this variance from the Court Plans on the current observed condition and performance of the cap (e.g., stability, erosion, slumping, ponding of water, etc.) and the potential impact on the projected future performance of the cap.

- c. *Drainage swale construction:* SITEC's June 30, 2014, memorandum stipulates that the drainage swale and the related down chute were not installed as they were deemed not required to prevent sloughing and cracking of the slope. However, sloughing and cracking of the slope are not the primary purposes of the swales and down chutes. Please provide a discussion of the adequacy of the as constructed drainage swales for the purpose of preventing erosion of the landfill cap in the discussion of the current conditions and performance of the cap and the projected future performance of the cap.
5. *Rip rap quality and depth.* The Closure Completion report does not document the quality of the rip rap used or the depth to which it was placed in the construction of the perimeter berm. SITEC states that McPhail Associates, LLC of Cambridge, Massachusetts ("McPhail") was also on site during construction of the berm, and the daily field reports of McPhail's inspectors are included in the Closure Completion report. The field reports do not document that McPhail's personnel were present during placement of the rip rap or the quality of materials used. Please amend the application to include all additional data that New Ventures currently has or can obtain through SITEC and McPhail Associates on the rip rap, and construction of the berm. In addition, please include a discussion of the current condition of the berm and its projected future performance, including its structural stability.
6. *Landfill gas control system.* As of the date of this notice New Ventures is undertaking but has not completed the actions required by the Order to restore the landfill gas control system. Completion of these actions, with applicable documentation of completion, is required for the landfill closure to be deemed complete. These actions include, without limitation:
 - a. *Flare.* The flare must be repaired and demonstrated to be reliably operating.
 - b. *Gas collection system and FML.* Actions to identify leaks from the vicinity of the landfill gas extraction wells and the FML and to make necessary repairs must be completed.
 - c. *Landfill Gas Control System inspection and tuning.* Complete the inspection and tuning of the landfill gas control system including, but not limited to, an evaluation of the operation and adequacy of the existing landfill gas header system; and submit the results of the landfill gas control system inspection and tuning, and Blue Granite's conclusions and recommendations on the operation and adequacy of the landfill gas control system including, without limitation, the existing landfill gas header system, the pretreatment system, and flare to MassDEP.

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- d. *Landfill Gas Control System Header Replacement.* The Final Judgment and design plans entered by the Court require the installation and connection of the landfill gas control system to a new header system above the FML (above cap header). The above cap header was intended to replace the existing header system and address, in part, sporadic blockages due to the accumulation of condensate in the existing header. SITEC identifies in the application that the southerly branch of the above cap header failed the pressure test and that as a result New Ventures intends to delay connection of the above cap header until an as yet to be determined date. Please amend the application to include the results of the testing and evaluation of the above cap header conducted by SITEC on September 19, 2013, including, but not limited to, the field data and observations, and SITEC's conclusions and recommendations.

7. *Signatories/Certifications.*

- a. *PE Certification.* The June 30, 2014 and September 15, 2014 memoranda were not certified (that is, signed and sealed) by the supervising Massachusetts Registered Professional Engineer as required by 310 CMR 19.011.
- b. *Applicant Signature.* The application has not been signed by a corporate officer of New Ventures. The application does not include a statement identifying the individual signing by name, profession, relationship to the applicant and legal interest in the facility sufficient to establish the individual as a "responsible official" of New Ventures or otherwise authorized to sign the application pursuant to 310 CMR 19.011 as effective on the date of submission.

As provided by Paragraph 2 of the Order, New Ventures shall address these deficiencies within sixty (60) days of the date of receipt of this notice, and shall fully comply with Paragraph 12.j of the Final Judgment not later than March 5, 2015.

If you have any questions in regards to this matter, please contact John Carrigan at phone (978) 694-3299.

Sincerely,

Sincerely,

This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.

DCA

David C. Adams
Environmental Engineer
Solid Waste Management

JAC

John A. Carrigan
Section Chief
Solid Waste Management

JAC/DCA/dca

Certified Mail: New Ventures Associates, LLC
Lynch, DeSimone & Nylen, LLP

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7008 0150 0002 0524 0069

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New Ventures Associates LLC
Crow Lane Landfill

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Cc:

City of Newburyport
Health Department
City Hall
60 Pleasant Street
Newburyport, MA 01950

Mayor Donna Holaday
City of Newburyport
City Hall
60 Pleasant Street
Newburyport, MA 01950

Richard A. Nylén Jr, Attorney at Law
Lynch, DeSimone & Nylén, LLP
12 Post Office Square
Boston, MA 02109

Michael Quatromoni
SITEC Environmental, Inc.
769 Plain Street, Unit C
Marshfield, MA 02050

Ambrose Donovan
McPhail Associates, LLC
2269 Massachusetts Avenue
Cambridge, MA 02140

MA Representative Michael Costello
Michael.Costello@state.ma.us

MA Senator Kathleen O'Connor-Ives
Kathleen.O'Connor.Ives2@state.ma.us

Office of the Attorney General, attn: Matthew Ireland
Matthew.Ireland@state.ma.us

MassDEP /Boston/OGC, attn: Michael Dingle
Michael.Dingle@state.ma.us

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